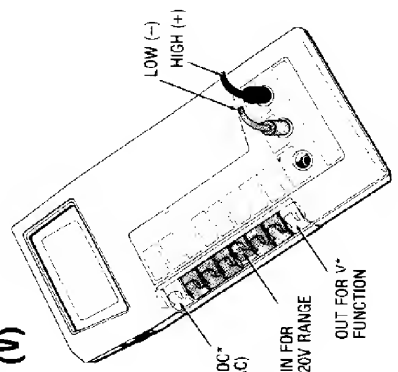


WARNING
 REMOVE INPUT SIGNAL AND TEST LEADS FROM B022A INPUT TERMINALS BEFORE OPENING THE BATTERY COMPARTMENT OR OTHERWISE ACCESSING OR TOUCHING THE FUSE AND/OR BATTERY. DO NOT OPERATE THE INSTRUMENT UNLESS BATTERY COVER IS IN PLACE AND FULLY CLOSED.

VOLTS (V)



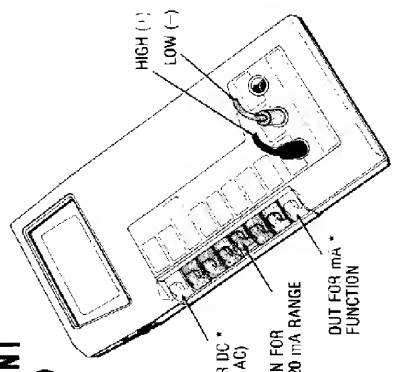
- Connect the test leads as shown above.
- Depress the grey switch beside the desired range (20V is shown; selected).
- Set the AC/DC switch out for DC or in for AC (DC is shown selected).
- Insure that all other switches are at the out or OFF positions.

WARNING
 TO AVOID ELECTRICAL SHOCK AND/OR INSTRUMENT DAMAGE, DO NOT CONNECT THE B022A TERMINALS TO SOURCES THAT EXCEED THE FOLLOWING LIMITS:

COMMON: 500V DC OR AC RMS WITH RESPECT TO EARTH GROUND.
 V-KΩ: 1000V DC OR 750V AC RMS WITH RESPECT TO THE COMMON TERMINAL (IN THE AC FUNCTION, 200 mV RANGE, SOURCES GREATER THAN 300V AC RMS SHOULD NOT BE CONNECTED LONGER THAN 15 SECONDS).

- Connect the test leads to the circuit being measured.
- Read the measured value on the display. The minus sign will appear if the V- terminal is negative with respect to the COMMON terminal.
- **ACCURACY:** 1-year, 18°C to 28°C (64°F to 82°F)
 DC: All ranges ±0.25% of reading ±1 digit.
 AC: All ranges (45 Hz-450 Hz) ±1% of reading ±3 digits

CURRENT (mA)



- Connect the test leads as shown.
- Depress the grey switch beside the range desired (20 mA range shown selected).
- Set the AC/DC switch out for DC or in for AC (DC shown selected).
- Insure that all other switches are at the out or OFF positions.

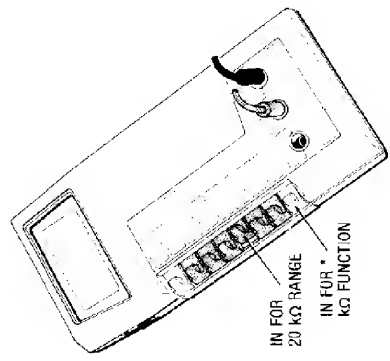
WARNING
 TO AVOID ELECTRICAL SHOCK AND/OR INSTRUMENT DAMAGE, DO NOT CONNECT THE B022A TERMINALS TO SOURCES THAT EXCEED THE FOLLOWING LIMITS:

COMMON: 500V DC OR AC RMS WITH RESPECT TO EARTH GROUND.
 mA: CURRENT OF 2 AMPS OR OPEN CIRCUIT VOLTAGE OF 250V DC/AC RMS

- Connect the test leads to the circuit being measured.
- Read the measured value on the display. In DC, the minus sign will appear if the mA terminal is negative with respect to the COMMON terminal.
- **ACCURACY:** 1-year, 18°C to 28°C (64°F to 82°F)
 DC: All ranges ±0.75% of reading ±1 digit.
 AC: All ranges (45 Hz-450 Hz) ±2% of reading ±3 digits

*NOTE: The function switches are push-push type. Do not pull them to the out or OFF positions.

RESISTANCE (kΩ)



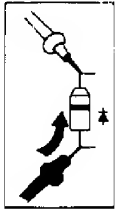
- Connect the test leads as shown.
- Depress the mA-V-KΩ switch.
- Depress the grey switch beside the range desired (20 kΩ is shown; selected).
- Make sure that the device being measured contains no electrical energy.

WARNING
 TO AVOID ELECTRICAL SHOCK AND/OR INSTRUMENT DAMAGE, DO NOT CONNECT THE B022A TERMINALS TO SOURCES THAT EXCEED THE FOLLOWING LIMITS:

COMMON: 500V DC OR AC RMS WITH RESPECT TO EARTH GROUND.
 V-KΩ: 500V DC OR AC RMS WITH RESPECT TO THE COMMON TERMINAL.

- Connect the test leads across the device being measured.
- Read the measured value on the display.
- **ACCURACY:** 1-year, 18°C to 28°C (64°F to 82°F)
 2 kΩ: 20 kΩ, 200 kΩ, 2000 kΩ Ranges: ±0.2% of reading ±1 digit
 20 MΩ Range: ±2% of reading ±1 digit

DIODE TEST ()



2 kΩ, 200 kΩ, and 20 MΩ ranges will turn on P-N junctions.
 (The open circuit voltage is less than 3.5V on the 2 kΩ range and less than 1.5V on all other ranges)

IN CIRCUIT RESISTANCE MEASUREMENTS

2 kΩ, 20 kΩ, and 2000 kΩ ranges can make in circuit resistance measurements.

*NOTE: The function switches are push-push type. Do not pull them to the out or OFF positions.

VOLTAGE TO dB CONVERSION

To make dB measurements, measure the signal using the voltage measurement function, then use the Volts-to-dBm Conversion Table below to find the equivalent dBm. The conversion table assumes that the reference impedance (circuit impedance) is 600Ω. If the circuit impedance (Z) is not 600Ω, add the following correction to the dBm value from the Volts-to-dBm Conversion Table:
 Correction Factor (dBm) = 10 log $\frac{600}{Z}$

VOLTS-TO-dBm CONVERSION TABLE

dBm	V	dBm	V	dBm	mV
+50	2.75	+11	2.45	-13	173.4
+49	2.18	+10	2.45	-13.5	163.7
+48	194.6	+9	2.18	-14	154.6
+47	173.4	+8	1.946	-14.5	145.9
+46	154.6	+7	1.734	-15	137.7
+45	137.8	+6	1.546	-15.5	130.0
+44	122.8	+5	1.377	-16	122.8
+43	109.4	+4	1.228	-16.5	115.9
+42	97.5	+3	1.094	-17	109.4
+41	86.9	+2	0.975	-17.5	103.3
+40	77.5	+1	0.869	-18	97.5
+39	69.0	0	0.775	-18.5	92.1
+38	61.5	-1	0.731	-19	86.9
+37	54.8	-2	0.690	-19.5	82.0
+36	48.9	-3	0.652	-20	77.5
+35	43.6	-4	0.615	-20.5	73.1
+34	38.8	-5	0.581	-21	68.0
+33	34.6	-6	0.548	-21.5	63.5
+32	30.8	-7	0.518	-22	59.0
+31	27.5	-8	0.489	-22.5	54.8
+30	24.5	-9	0.461	-23	50.9
+29	21.8	-10	0.436	-23.5	47.3
+28	19.4	-11	0.411	-24	43.6
+27	17.3	-12	0.388	-24.5	40.1
+26	15.4	-13	0.367	-25	36.8
+25	13.7	-14	0.346	-25.5	33.6
+24	12.2	-15	0.327	-26	30.8
+23	10.9	-16	0.308	-26.5	28.2
+22	9.75	-17	0.291	-27	25.9
+21	8.69	-18	0.275	-27.5	23.8
+20	7.75	-19	0.260	-28	21.8
+19	6.90	-20	0.245	-28.5	20.0
+18	6.15	-21	0.231	-29	18.3
+17	5.48	-22	0.218	-29.5	16.8
+16	4.89	-23	0.206	-30	15.5
+15	4.36	-24	0.194	-30.5	14.3
+14	3.88	-25	0.183	-31	13.2
+13	3.46	-26	0.173	-31.5	12.2
+12	3.08	-27	0.163	-32	11.3
		-28	0.154	-32.5	10.5
		-29	0.145	-33	9.75
		-30	0.137	-33.5	9.0
		-31	0.129	-34	8.3
		-32	0.122	-34.5	7.7
		-33	0.115	-35	7.1
		-34	0.109	-35.5	6.6
		-35	0.103	-36	6.2
		-36	0.097	-36.5	5.8
		-37	0.092	-37	5.4
		-38	0.086	-37.5	5.0
		-39	0.081	-38	4.6
		-40	0.075	-38.5	4.3
		-41	0.070	-39	3.9
		-42	0.065	-39.5	3.6
		-43	0.061	-40	3.3
		-44	0.057	-40.5	3.1
		-45	0.053	-41	2.8
		-46	0.050	-41.5	2.6
		-47	0.047	-42	2.4
		-48	0.044	-42.5	2.2
		-49	0.041	-43	2.0
		-50	0.038	-43.5	1.8

BATTERY/FUSE TYPES

BT appears on the display when approximately 20-hours of operation remain.
 BATTERY TYPE: 3V carbon-zinc or alkaline, NEDA type #1604
 FUSE: 2A/250V mini-jump, JSS only type F